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AGRICULTURAL PROGRESS IN THE ARGENTINE REPUBLIC

THIRTY-FIVE years ago many a young Englishman turned his eyes to the Argentine Republic as a Land of Goshen in which a fortune might be rapidly made. Not a few emigrated to that country ; but many returned after a short stay on finding life and property insecure and facilities for the transport and marketing of produce scarcely at all developed. In the outside 'camps' the Indians made frequent raids upon cattle and sheep, which the settlers had to defend with their rifles, often having to fight for their lives as well as their property. Indeed, it was not until 1880 that the Indians were driven out of the southern parts of the Province of Buenos Ayres. Away from the vicinity of towns there were hardly any roads, and up to 1861, when the Argentine Republic as it now exists was formed by the annexation of the Confederation to the Republic of Buenos Ayres, only eighteen miles of railway had been opened to traffic. Under these circumstances the discouragements to tillage husbandry were considerable, and they were enhanced, as far as English settlers were concerned, by difficulties of language and labour. Stock-breeding on a large scale, which required a considerable amount of capital, was the only tempting career for the British agriculturist. Therefore, most of those whose means were small concluded that Argentina was not the country for them. If the progress of Argentine agriculture had been dependent upon British settlement, it would not now be a subject of world-wide astonishment ; while the natives of the country, who have always shown a distaste for agricultural pursuits, would probably have failed to produce enough corn for home consumption.

Yet the natural advantages of the country for tillage husbandry of a varied character are considerable. Out of a total area of 729,000,000 acres, it is estimated 240,000,000 acres are suitable for cultivation ; and on the greater part of this immense

area cereals could be grown, though of course the profitability of producing corn in distant tracts of country must depend very much on the cost of transport. A large proportion of the cultivable country consists of a level and treeless plain, which can be brought into cultivation at very little expense. Much of it is fertile and well intersected by rivers, though these are chiefly shallow in the interior of the country, and in the central portion of the Republic there are hardly any waterways. The climate is temperate, but liable to extreme changes, except in the north and north-west, where it is tropical, and suitable to the production of sugar, and in the extreme south, where it is cold, and best fitted for sheep husbandry. Even a portion of the Province of Buenos Ayres is liable to frosts in nine months of the year, and damage to crops is not infrequent. Except in the central plain, much of which is too arid for profitable cultivation without irrigation, the rainfall is usually sufficient, and sometimes excessive; but drought is not uncommon, even in the settled districts where cereals are grown, and occasionally there are heavy losses of live stock in the pastoral districts from this cause. Locusts are sometimes very destructive to maize and other crops, but rarely do much damage to wheat, which is nearly or quite ready for harvest at the period of the season when they commonly appear.

In considering the past progress and the near future of agriculture in Argentina, it is not necessary to pay regard to the great proportion of the country in which the disadvantages at present appear to outweigh the advantages, because there is room for an immense extension of cultivation without touching those portions of the country. The bulk of the corn is produced in the eastern and central portions of the Provinces of Buenos Ayres, Santa Fé, Entre Rios, and Cordoba, and, according to the late Mr. Alois Fliess, only about three per cent. to five per cent. of the respective areas of these provinces was under cultivation in 1891. Even in these picked areas, the average yield of wheat, one year with another, appears to be only 10 to 11 bushels an acre, or less than it is in the United States; but it is to be borne in mind that practically the whole of the corn is grown year after year on the same land without manure, and that the cost of bringing the land into cultivation is, and always has been, much less than in the States on an average, partly because of the levelness of the country and the absence of forests, and partly on account of the cheapness of labour.

Until recently, wars and revolutions have greatly retarded

the agricultural development of Argentina; for although it is said that the settlers have not been much interfered with, foreigners, and especially men of capital, are deterred by an unsettled state of government from settling in a country where they suppose that neither life nor property can be safe. The Argentine Republic, too, has been the prey of financial speculators from the beginning of its history. In his message to Congress in 1891 President Pellegrini declared that the land speculation had embraced the whole country, 'the very deserts of the Chaco, of the Pampa, of Pantagonia, the very rocks on the highlands of the Andive provinces.' But although bad government, the squandering of money in war, and reckless financing have kept capital from productive employment in the country and ruined its credit, one indirect result, as will be presently shown, has been, during the last few years, to stimulate agricultural development in an extraordinary degree. This, however, is a recent occurrence, and for many years that development was seriously retarded by the unfortunate conditions referred to.

The chief difficulty in tracing the progress of Argentina lies in the lack of trustworthy statistics. There are no official statistics of agriculture, and estimates often differ widely. The principal authorities for figures other than those relating to immigration, railways, exports, and imports, which are official, are the late Mr. Fliess, Dr. Latzina, Mr. Mulhall, the Buenos Ayres *Standard*, the *Nacion*, Finance Ministers at various periods, and British representatives who have done their best to strike a mean between different computations. To save repeated references to authorities, I here acknowledge my indebtedness to Vice-Consul Gastrell, who has written many excellent reports on the Argentine Republic; to Mr. Herbert, Mr. Raikes, and Vice-Consul Mallet. Estimates are all the more uncertain because of the rarity of a census. The latest census published was that of 1869, which was the first taken since the Argentine Republic was established. A new one has been taken this year, the results of which are not yet made known.

In 1861 the population was only about 1,350,000, and no more than 480,000 acres of land were supposed to be under tillage, the country not being self-supporting in respect of corn. The tide of immigration increased steadily up to 1867, and rapidly in 1868 and several following years up to 1889, after which there was a great decline. During the thirty-four years ending with 1890, the number of immigrants in excess of emigrants was 1,248,469, 60 per cent. being Italians, 18 per cent. Spaniards, 10½ per cent. French-

men, and only $2\frac{1}{2}$ per cent. Britons. At the end of 1890 the population was estimated at 4,000,000, about one-fourth of the people being of Italian parentage. It is mainly to Italian industry that the development of tillage husbandry is due. At present the population is computed at about 4,700,000.

In spite of the great immigration, the extension of tillage was slow for many years after 1861. In 1874, the area under the plough was supposed to be only 825,000 acres, many agricultural colonies, and especially those of British nationality, having failed. But the frugal Italians, doing nearly all the work with the help of their families, steadily increased their hold upon the country, and by 1884 the tillage area had risen to about 4,260,000 acres. After that year there was a rapid increase. In 1890, Vice-Consul Gastrell computed the total cultivated area at 5,172,000 acres, in 1891 at 7,400,000 acres, in 1892 at 8,875,000 acres, in 1893 at 12,500,000 acres, and in 1894 at 15,000,000 acres. Thus the area under tillage appears to have been doubled in the last three years. The year named in each case, as throughout this article, is the one in which harvest (which usually begins in December and finishes in January) is completed.

European interest in Argentine agriculture, as distinct from the pastoral industry, relates chiefly to the growth of wheat, and in this the recent progress has been most marvellous. Previous to 1870, the cultivation of this cereal was insignificant, extending to only about 24,000 acres, and in 1880 the area under wheat was no more than 490,000 acres. After 1886, there was a considerable increase, the estimate for 1887 being 2,000,000 acres, and by 1890 about 2,800,000 acres were cultivated. Then came a period of rapid extension, about 6,100,000 acres having been harvested in 1893-4. Owing to the extremely low prices of that year, it was supposed that most of the new land intended for wheat was devoted to some other crop. However, the National Land Office has just published returns estimating the area of wheat sown in 1894, for the harvest of 1894-5, at 7,141,000 acres.

Of course, the production of wheat followed the acreage more or less closely. It was small until 1869, when an exceptionally abundant crop reached about 1,148,000 quarters. As recently as 1880, after a poor harvest, Argentina imported a large quantity of wheat, namely 813,000 qrs., and up to 1887, when 2,250,000 qrs. were produced, the yield having been extraordinary, the exports had only once—in 1884—amounted to as much as half a million quarters. After two years of small production, we come to 3,858,750 qrs. as that of 1890, of which 1,582,980 qrs. were

exported. From that time the increase was enormous, the crop of 1892-3 being estimated at 7,120,000 qrs., and the exports at 4,873,000 qrs.; while the corresponding figures for 1893-4 were 9,895,000 qrs. and 7,648,000 qrs. The harvest of 1894-5 was a bad one; nearly 50 per cent. less than that of 1893-4, which was the greatest ever grown.

What is the explanation of this enormous increase of wheat production during a period in which prices were rapidly falling in Europe? It is not the immigration merely, for the influx of foreigners was greatest during the twelve years ending with 1889, when the net arrivals amounted to 904,426; and up to 1887, as is clear from the records of exports, the production of wheat only kept pace with the increasing demands of the population. As recently as 1888, moreover, the Buenos Ayres *Standard* admitted that Argentine wheat-growers could not compete with producers in the United States. In the five years ending with 1894 immigration was greatly reduced; yet the expansion in the wheat area was more than twice as great in these years as it was in the ten years ending with 1889, when immigration was greatest.

The only explanation of the rapid expansion referred to, after a period of comparatively small increase in wheat production, is one which no prejudice against Bimetallism should discredit. It is the rise in the premium on gold, which counteracted the fall in the gold price of wheat. This is the explanation given by the Argentine Finance Minister, as well as by Mr. Gastrell and other British representatives in the Republic.

Let us see how the statistics of acreage, production, exports, wheat prices in England, and changes in the value of the paper dollar stand together for certain years. It has been shown that no rapid expansion of wheat production took place until after 1887, and as the increase was not very striking in 1888 and 1889, the figures for these years may be omitted to save space. But to show the rapidity of increase during the last five years, the details for 1890-94 are necessary. See table on p. 521.

It was in 1885 that the paper currency was made inconvertible, and in that year the average price of a hundred dollars gold in paper currency was 137, whereas in 1884 gold was at par. In 1886 the average was 139, and in 1888 and 1889, the years not given in the table, it was 140 and 188 respectively. In the two years following 1887 there was a great falling off in exports of wheat, the harvests having been deficient, and it was not till 1890, when for every dollar in gold price the grower of wheat obtained 2.61 dollars in paper, that a great increase in exports

began. The fall of a few pence a quarter in the price between 1887 and 1890 was as nothing in comparison with the advance in the gold premium. It remained, however, for the great increase in the gold premium in 1891, helped by a temporary rise in the price of wheat, to stimulate production in the most remarkable manner. A little time was required to bring fresh land into cultivation, and, accordingly, as the table shows, it was not until 1893 that the full results of the new advantage to Argentine wheat-growers began to appear. In other words, the high gold premium of 1891, with an advance in European prices, induced Argentine farmers to sow in the following year a greatly increased area of wheat for the harvest ending in 1893. The decline in the price which took place in that year was not sufficient to check the stimulus afforded by a gold premium which allowed of the receipt of $3\frac{1}{4}$ paper dollars for each gold dollar in the price of wheat, especially as the harvest had been a good one. Therefore another remarkable extension of the acreage took place when the crop of 1893-4 was sown, and as the harvest proved the best ever grown in the Argentine Republic, the total production approached ten million quarters, and the exports reached 7,648,000 quarters. Thus, after being an insignificant wheat-exporting country up to the end of 1889, except in 1887, Argentina, in four years, advanced to the third place among the great exporting countries of the world, and in five years to a position far ahead of India, and approaching the average annual exports of Russia for the last four years.

Year.	1887.	1890.	1891.	1892.	1893.	1894.
¹ Acres of Wheat	2,000,000	2,800,000	2,990,000	3,000,000	5,300,000	6,100,000
Product, qrs. ..	2,250,000	3,858,750	4,157,300	4,570,800	7,120,000	9,894,500
Export, qrs.....	1,086,250	1,582,980	1,862,500	2,280,000	4,873,000	7,648,000
Price per qr. in England	$\left. \begin{array}{l} \text{ } \end{array} \right\} 32s. 6d.$	31s. 11d.	37s.	30s. 3d.	26s. 4d.	22s. 10d.
Paper dollars per \$100 gold	$\left. \begin{array}{l} \text{ } \end{array} \right\} 135$	261	377	325	324	357

During the last four months of 1894, when the average price of wheat in England was below 20s. a quarter—going down to

¹ Harvest ending in January of the year named. Area sown in 1894 officially returned at 7,141,000 acres.

17s. 6d. as the lowest weekly average—the profits of the Argentine growers, not favourably situated for the shipping of their produce, became very small, if they did not disappear; but so long as they can get between three times and four times the gold price in their paper currency, they will be able to produce wheat to sell in England at 20s. a quarter. It is easy to see how they can do so, as nearly all their outgoings are paid in paper, and a dollar in paper goes nearly if not quite as far as it went in paying farming expenses before the premium rose. The price of land and its rent or interest on its purchase-money are no higher in paper than they were in 1885, and wages are very little, if any, higher. Only imported goods, of which the penurious Italian settler buys very little indeed, are dearer in paper money in proportion as the gold premium rises. Even when the gold value of his wheat on the railway is only 12s. to 14s. a quarter, he gets from 39s. to 42s. in paper when the gold premium is as it was in 1892 and 1893, and from 45s. 10d. to 49s. when it is as it was in 1894. Cheap as both land and labour are in Argentina, wheat production, when the yield is normal, pays sufficiently well at such prices. It is true that the position is an unstable one; but so long as it exists—and it has lasted for some years already—the Argentine grower will be able to undersell the producers of every other country in the world.

In one of his admirable reports, dated June, 1893, Vice-Consul Gastrell sums up the case as follows:—

During the last five years the continually rising gold premium made wheat growing unusually remunerative. Wheat, whether sold locally or for export, naturally fetched a price based on its gold value in European markets, which price meant a great deal in depreciated paper currency, in which the wheat-grower paid all his outlay, except for agricultural instruments and a few other articles, which are paid for at gold rates. His wages and expenditure being consequently so much less when converted into gold, his profits were considerably higher than in former years. Again, the high gold premium enabled persons having gold to buy wheat lands cheaply, for their value in depreciated paper dollars remained much the same. A great impetus was thus given to wheat cultivation, and a demand created for labour and capital to still further increase its area.

It is scarcely necessary to say that the lowered gold value of land is a great disadvantage to settlers who bought years ago and desire to sell out and return to Europe with their savings. The depreciation in the paper currency also renders it difficult to save sterling money from farming or wages with a view to a return to Europe. For labourers and other workmen, as has been shown, the depreciation is bad from all points of view, and

British working men are warned by our representatives in Argentina that the country is no place for them unless they have a little capital.

Export statistics, although they show great increases with respect to maize, lucerne hay, and linseed, do not by any means fully indicate the progress made in the production of these crops. In the case of maize the exports have varied immensely, as the crops have sometimes been seriously injured by drought or locusts, or by both combined, as they were in 1880, 1881, 1883, and from 1891 to 1894. The latest crop, however, is a great one. The exports rose from 107,327 tons in 1882 to the maximum of 707,281 tons in 1890, but have been small since, except in 1892, when they reached 445,935 tons. The area of land devoted to maize was estimated at 980,000 acres in 1887, and at over 2,000,000 acres in 1891, and 2,350,000 acres in 1893. It is probably now fully 2,500,000 acres. The consumption of maize in the Argentine Republic is very great, and is estimated at from 600,000 tons to more than double that quantity when it is plentiful, nearly all animals being partly fed on this grain. The Argentine ton, it should be mentioned, is the metric ton of 1,000 kilos., or 2,205 lb.

The cultivation of flax for linseed has greatly increased, though the exports of late have fallen off, because of the rapid advance in the home manufacture of oils, which are now imported only on a small scale. The exports, which were only 23,351 tons in 1882, reached the great total of 630,720 tons in 1890; but this was quite exceptional, and it only serves to show what could be done when a good crop was grown. Since that year the quantity has been very much less. Indeed, there is no record of so much as 100,000 tons having been exported in any other year. The area under linseed and rape in 1891 was estimated at 145,000 acres, and it has since increased greatly.

So considerable had been the progress of sugar production in the tropical districts of the country that it amounted to about 90 per cent. of the consumption in 1893, the quantity being about 62,000 tons. The crop was not a good one in 1893; but the area was supposed to have been expanded by 50 per cent. in that year. As the area in 1891 was reckoned to amount to 64,000 acres, it is probably over 100,000 acres now. The value of an average crop of sugar cane at the average price was estimated in 1891 at £12 an acre.

About 85,000 acres were under vines in 1893, not reckoning vineyards of less than a hectare each. The value of an average

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crop of grapes in that year was estimated by Mr. Fliess at over £21 per acre. The planting of vines has since made much progress. The yield is said to be larger than it is in Europe.

Tobacco occupied about 13,000 acres in 1891, and, like vines, yielded a good profit. The value of an average crop at an average price was put at £61 per acre.

No crop, except wheat, has had a greater expansion in recent years than alfalfa (lucerne). In 1891 the extent was put at 1,495,000 acres, and in 1893 at 3,000,000 acres, while sowing has gone on very extensively during the past year. A great export trade in lucerne hay has developed recently. Up to 1888 the greatest quantity exported in any year was less than 14,000 tons; by 1891 the quantity had risen to 30,000 tons; and in 1893 it reached 53,000 tons, a large portion being sent to Europe, where drought had caused a great scarcity of hay. The crop is far more profitable than any kind of corn, and there is no doubt that it will become one of the greatest sources of wealth in the Republic.

The gold premium has greatly stimulated all the branches of agricultural industry mentioned above, and especially those which require a large amount of labour. Some of them have also been materially aided by high protectionist duties.

No account of the progress of tillage husbandry in Argentina would be complete, even as a summary, which left unmentioned the development of the railway system. It has been stated that only eighteen miles of railway were open thirty-four years ago. As recently as 1885 the extent was only 2,814 miles; but by 1893 the length was 8,376 miles.

Although it is in tillage that the most remarkable recent progress has been made in the Argentine Republic, stock-raising always has been, and probably always will be, the most important branch of the agriculture of that country and the chief source of its wealth. Ten years ago the proportion of the value of stock-raising products to that of the total exports was 72 per cent., and that of the products of tillage husbandry was only 13 per cent. In 1893 the proportions were 60 and 31½ per cent. As recently as 1889 the proportion of the former class of exports was 73 per cent., and that of the latter only 14 per cent. These figures show how tillage has gained ground upon the pastoral industry. In 1892 the value of the products of stock-raising exported was nearly £15,250,000, and that of the products of tillage was £5,350,000. In the following year the former class of exports diminished in value to £10,601,000, and the latter increased to nearly £5,803,000. Both increased greatly in volume,

the latter especially, in 1894; but the fall in prices has told against both. A new development, however, has now set in for the pastoral industry, and in all probability the ground lost by it in its race with the other division of agriculture will be regained shortly.

Live-stock statistics in the Argentine Republic are peculiarly untrustworthy, even for that country, so that it is very difficult to measure the progress made by the pastoral industry.

In 1860 the number of sheep was believed to be 14,000,000; in 1877, 48,000,000; and in 1888, 67,000,000. Another account made the number in 1861 16,000,000, and it is hardly likely that there was an increase of 2,000,000 in a year. As to the figures for 1888, the number of sheep was estimated by the *Buenos Ayres Standard* at nearly 71,000,000 in 1884, or at 5,000,000 more than the American Consul's number for 1888. President Celman, in 1887, represented the number of sheep as 100,000,000, whereas the *Buenos Ayres Standard* makes it 75,000,000, and another authority 80,000,000. Similarly for 1893, estimates were as wide as from 75,000,000 to 86,000,000, and for 1894 as far apart as 80,000,000 and 85,000,000. No reliance can be placed on estimates where they differ so enormously for the same year. Apparently the number of sheep has increased but little, if at all, since 1887. Between that date and the present time there have been some bad years for sheep farmers, owing partly to heavy losses from drought, and partly to the great fall in the price of wool. It is true that the frozen mutton trade has grown to large dimensions; but prices of late have been extremely low, and partly for that reason there has been a fresh development in the shipment of live sheep to England.

Estimates of the number of cattle also differ widely. In 1861 the number was put at about 10,000,000, in 1884 at 14,000,000, in 1887 at 18,000,000 by one authority and at 20,000,000 by President Celman, in 1889 at 18,200,000, in 1893 at 22,000,000, and in 1894 at 25,000,000—probably much too high.

With both sheep and cattle there has been a more remarkable advance in quality than in quantity. By the importation of the best bulls and rams from Great Britain the quality of many herds and flocks has been gradually levelled up. Previous to 1880 Argentina cattle were not good enough for export to Europe, and their meat was only exported in the form of dried beef; but last year 28,000 live bullocks and 20,000 sides of frozen beef were sent to this country from the Republic, with 90,000 live sheep and nearly 586,000 cwts. of frozen mutton. Altogether, in 1893, nearly

202,000 cattle and 72,000 sheep were exported. The frozen mutton trade began in 1883, when 17,155 carcases were exported. Eleven years later the number sent to this country alone was 1,376,742.

A new development of stock-feeding has recently set in. The great drawback to fattening cattle and sheep for export has been the uncertainty of food on the natural pastures, which were liable to be parched at times by drought. But now some of the great estancieros are growing lucerne on a very extensive scale, so that they will have an abundance of food for their fattening stock at all times of the year, green or in the form of hay.

Stockbreeders, like wheat-growers, have been helped in their export trade by the gold premium, though to a less extent ; otherwise they would have found it hard to meet the heavy fall in the prices of wool and meat. Hitherto they have not gone into the dairy industry on an extensive scale, and it is only within the last year or two that the production of butter in the country has been sufficient for home consumption.

While it is difficult to decide whether the depreciation of the Argentine currency is, on the whole, to the advantage or disadvantage of the country, there is no question as to the bad government which produced it having been injurious, seeing that for a great number of years it retarded the progress of agriculture and all other industries to a very serious extent by keeping settlers and capital out of the country. Under more happy circumstances the population probably would have risen to double its present number, and the capital employed in productive industry to four times its present amount. In that case a good home trade for agricultural products would have been established, and this would have been better than an export trade depending upon a state of financial affairs which in many ways is disastrous to the country.

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